

a13  
correct

S. Wing [ceiling 130] ceilings 130A and 130B sloped downward aft to the transom for efficient planing (see [FIG. 6] FIGS. 6A-C).

Please amend the paragraph beginning on page 8, line 29, as follows (Amended Once):

Q14

As with the powerboat embodiments described above, hydrodynamic serrations 124 may be mounted on the underside of the sailboat 100. As shown in FIGS. 6A-C, the wing channel ceilings [130] 130A and 130B preferably decrease in height and the curvature of the wing channels [114] 114A and 114B decreases, moving from the bow section (FIG. 6A) to the mid-section (FIG. 6B) to the aft section (FIG. 6C). As shown in FIG. 6C, the outer skirts [118] 118A and 118B preferably decrease in length toward the aft end of the hull to provide efficient planing surfaces.

**IN THE CLAIMS:**

Please amend the claims as follows:

Q15

1. (Amended) [A watercraft comprising a hull having a fore end, an aft end, and a longitudinal axis extending between the fore end and the aft end, the hull comprising:] A watercraft comprising:

a hull having a fore end, an aft end, and a longitudinal axis extending between the fore end and the aft end:

a displacement body portion of the hull that extends between the fore end and the aft end, the displacement body having a static waterline, a port side, and a starboard side:

a first channel-defining structure portion of the hull that is located on the port side of the displacement body, including a first wing structure extending laterally from the port side of the displacement body above the static waterline and a first outer skirt structure that extends downwardly from the first wing structure to below the static waterline in spaced apart relationship to the displacement body, said first outer skirt structure having an outer surface that is substantially perpendicular with respect to the static waterline and said first channel-defining structure defining a first channel with a cross-sectional surface that is generally arcuate: and

*ais control*

a second channel-defining structure portion of the hull that is located on the starboard side of the displacement body, including a second wing structure extending laterally from the starboard side of the displacement body above the static waterline and a second outer skirt structure extending perpendicularly downwardly from the second wing structure to below the static waterline in spaced apart relationship to the displacement body, said second outer skirt structure having an outer surface that is substantially perpendicular with respect to the static waterline and said second channel-defining structure defining a second channel with a cross-sectional surface that is generally arcuate:

the first and second channels extending from the fore end to the aft end and the first and second channels being adapted to capture a bow wave and to cause air and water to mix and spiral toward the aft end of the hull as compressed aerated water, thereby reducing friction drag, increasing lateral stability, and dampening transmission of bow wave energy at the aft

end of the hull

[a displacement body; and

two downwardly extending outer skirts, each of the outer skirts being located on either side

of the displacement body and connected thereto by a planing wing having a wing channel, wherein the ceilings of the wing channels are above the static waterline in the fore end and extend downward below the static waterline in the aft end].

*215  
cont'd*

2. (Amended) A watercraft as recited in claim 1 [The watercraft of claim 1], wherein [the outer surfaces of the outer skirts] each of the first and second outer skirt structures has an outer surface and said outer surfaces are substantially perpendicular with respect to the static waterline both above and below the static waterline, said surfaces are straight longitudinally, and said surfaces are parallel to the longitudinal axis of the hull.

3. (Amended) A watercraft as recited in claim 1 [The watercraft of claim 1], wherein [the inner surfaces of the outer skirts] the first and second skirt structures have inner surfaces that are generally arcuate.

4. (Amended) A watercraft as recited in claim 1 [The watercraft of claim 1], wherein [the

outer skirts] first and second outer skirt structures are tapered inward only to form arcuate first and second channels.

5. (Amended) A watercraft as recited in claim 1 [The watercraft of claim 1], wherein [the cross-sectional surface of each wing channel] each of the first and second channels has a cross-sectional surface that is concave with respect to the static waterline.

215  
central  
6. (Amended) A watercraft as recited in claim 5 [The watercraft of claim 5], wherein [the cross-sectional surface of each wing channel at the fore end] each of the first and second channels has a cross-sectional surface at the fore end that is generally arcuate.

7. (Amended) A watercraft as recited in claim 6 [The watercraft of claim 6], wherein [the curvature of the wing channel cross-sectional surface] the cross-sectional surface of each of the first and second channels has a curvature that is greater at the fore end than at the aft end.

8. (Amended) A watercraft as recited in claim 1 [The watercraft of claim 1], wherein [the cross-sectional surface of each wing channel] each of the first and second channels has a cross-sectional surface that is generally arcuate at the fore end and generally linear at the aft

end.

9. (Amended) A watercraft as recited in claim 1 [The watercraft of claim 1], wherein [the hull further comprises one or more serrations located on the surface of the wing channels and] each of the first and second channels has a surface that includes a serration extending downward below the static waterline.

*215  
Cauton*

10. (Amended) A watercraft as recited in claim 1 [The watercraft of claim 1], wherein [the hull further comprises one or more serrations located on the surface of the displacement body and extending] the displacement body has an undersurface and at least one serration on said surface that extends downward below the static waterline to disperse the propeller wake.

11. (Amended) A watercraft as recited in claim 1 [The watercraft of claim 1], wherein the first and second channels are so adapted that upon forward movement of the watercraft through a body of water the waves generated by the displacement body and the [skirts] first and second outer skirt structures are substantially directed into the [wing channels] first and second channels, resulting in substantial wave suppression.

12. (Amended) A watercraft as recited in claim 11 [The watercraft of claim 11], wherein the watercraft comprises a mechanical propulsion system.

13. (Amended) A watercraft as recited in claim 12 [The watercraft of claim 12], wherein the mechanical propulsion system [is] includes at least one of an internal combustion system, an electrical system, and a compressed air system [, or a combination thereof].

a15  
cont'd

14. (Amended) A watercraft as recited in claim 12 [The watercraft of claim 12,] wherein the mechanical propulsion system [comprises one or more propellers] includes at least one propeller.

15. (Amended) A watercraft as recited in claim 14 [The watercraft of claim 14], wherein at least one propeller is located on the displacement body.

16. (Amended) A watercraft as recited in claim 14 [The watercraft of claim 14] having two propellers, wherein [each of the two propellers is located in a wing channel] a first one of the two propellers is located in the first channel and a second one of the two propellers is located in the second channel.

17. (Amended) A watercraft as recited in claim 1 [The watercraft of claim 1], wherein the hull further comprises [two or more downwardly extending inner skirts attached to either side of the displacement body, wherein the outer skirts flank the inner skirts] at least a first inner skirt attached to the port side of the displacement body inboard of the first outer skirt structure and at least a second inner skirt attached to the starboard side of the displacement body inboard of the second outer skirt structure, said first and second inner skirts being adapted to isolate aerated water in the first and second channels from solid water flowing under the displacement body in order to thereby help prevent propeller cavitation.

Claim 18. (Amended Once) A watercraft as recited in claim 1 [The watercraft of claim 1], wherein the watercraft is a sailboat.

Please enter new claims 19-21:

--19. (New) A watercraft as recited in claim 18, wherein each of the first and second outer skirt structures has a tip that extends outward relative to the longitudinal axis.

20. (New) A watercraft as recited in claim 18, wherein each of the first and second outer skirt structures has a surface with at least a portion that curves outward relative to the longitudinal

axis.

21. (New) A watercraft, comprising: a hull having a displacement body with a bow, a port side, and a starboard side; a first channel-defining structure portion of the hull that is located on the port side of the displacement body, including a first wing structure extending laterally from the port side of the displacement body above the static waterline and a first outer skirt structure extending perpendicularly downwardly from the first wing structure to below the static waterline in spaced apart relationship to the displacement body, said first outer skirt structure having an outer surface that is substantially perpendicular with respect to the static waterline and said first channel-defining structure defining a first channel with a cross-sectional surface that is generally arcuate; and a second channel-defining structure portion of the hull that is located on the starboard side of the displacement body, including a second wing structure extending laterally from the starboard side of the displacement body above the static waterline and a second outer skirt structure extending perpendicularly downwardly from the second wing structure to below the static waterline in spaced apart relationship to the displacement body, said second outer skirt structure having an outer surface that is substantially perpendicular with respect to the static waterline and said second channel-defining structure defining a second channel with a cross-sectional surface that is generally arcuate; the first and second channels being adapted to function as (i) means for directing waves generated by the bow into the first and second channels, so as to reduce lateral wave pollution from the watercraft, (ii) planing means for providing surfaces on which the watercraft is capable of planing on the waves

A